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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,333	02/15/2001	Dong-seek Park	Q58598	3174

7590 04/06/2004

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EXAMINER	
BRITT, CYNTHIA H	
ART UNIT	**PAPER NUMBER**
2133	16

DATE MAILED: 04/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/783,333	PARK ET AL.	
	Examiner	Art Unit	
	Cynthia Britt	2133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-10 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-10 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 15 February 2001 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 13,15.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-10 are presented for examination.

Information Disclosure Statement

The information disclosure statement (IDS paper 13) submitted on May 14, 2003 has been considered by the examiner.

The information disclosure statement (IDS paper 15) submitted on February 4, 2004 has been considered by the examiner.

Claim Rejections - 35 USC § 101

The rejection of claims 1-10 under 35 U.S.C. § 101 as not being supported by either a specific and substantial utility or a well established utility has been withdrawn based on the current amendment.

Claim Rejections - 35 USC § 112

The rejection of claims 1-10 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement has been withdrawn based on the current amendment.

Specification

The objection to the specification because of the incorporation by reference of the Korean Patent Application (00-24209) has been withdrawn based on the Applicant amending the specification to delete this reference to the Korean Patent Application.

Response to Arguments

Applicant's arguments filed January 23, 2004 have been fully considered but they are not persuasive.

Applicant asserts "the present invention recites forming a predetermined layer protocol by adding a header to multimedia data which is transmitted through a radio path, and that Strawczynski et al. do not disclose forming a predetermined layer protocol by adding a header to multimedia data, which is transmitted through a radio path, or even relate to multimedia data generally."

The examiner would like to point out that by the addition of a header to packetized data, a predetermined protocol layer has been added inherently. This is true not only in radio, wireless, internet and multimedia data as each layer of a protocol typically adds information in the form of a header. Once the packet reaches its destination, these layers are removed.

The examiner would also like to point out that column 3 lines 56-58 of Strawczynski et al. teach that the invention is applicable to various wireless transmission protocols, for example, TDMA, CDMA, GSM, etc. which do include multimedia transmission. Also in column 4 lines 10-19 teach, "Various communication

services can be provided. Although subscriber units can support multiple applications, for simplicity we show, by way of example, a subscriber unit which provides voice communications, a subscriber unit which is connected to a computer and provides multimedia data applications, and subscriber unit which represents a radio unit conduit to a local area network and supports a plurality of communication links with the base station."

Applicant asserts, "the Examiner has only generally asserted that the reference discloses a method in which error indication of data can be sent to another layer and various protocols can be used. Applicant submits that the cited portions of the reference do not make this disclosure."

The examiner would like to point out that Strawczynski et al. (in column 2 line 66 through column 3 line15), teach that "if detectable but uncorrectable errors are detected on a particular cell, but no error is detected in the header, then the system can conclude that there is an error in the payload. This can allow systems to select between various treatments, including: forwarding the cell, forwarding the cell with a flag, discarding the cell, and producing an indication of the error to a higher layer protocol."

Applicant asserts, "Moreover, the Examiner's description on pages 6-7 of what "has been recognized" does not appear to correspond to the disclosure of the cited reference. As such, the description appears to be the Examiner's own musings regarding error detection systems, which is an inappropriate basis for rejection."

The examiner would like to point out that in column 1 lines 60-65 Strawczynski et al. teach "Advantageously, the inventors have recognized that for a given code length there is a higher probability of detecting an error using an error detection technique than there is for determining that a detectable but non-correctable error pattern occurred using an FEC technique."

As per the applicant's arguments based on the specific protocols, the examiner would like to point out that column 3 lines 56-58 of Strawczynski et al. teach that the invention is applicable to various wireless transmission protocols, for example, TDMA, CDMA, GSM, etc. which do include multimedia transmission. Also, in column 4 lines 10-19 Strawczynski et al. teach, "Various communication services can be provided. Although subscriber units can support multiple applications, for simplicity we show, by way of example, a subscriber unit which provides voice communications, a subscriber unit which is connected to a computer and provides multimedia data applications, and subscriber unit which represents a radio unit conduit to a local area network and supports a plurality of communication links with the base station."

Therefore the previous rejection of claims 1-10 is maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-10 rejected under 35 U.S.C. 103(a) as being unpatentable over Strawczynski et al. U.S. Patent No. 6,628,641.

As per claims 1,3,7,9, and 10, Strawczynski et al. substantially teach the claimed wireless packetization method and apparatus in which an improved transceiver architecture and method for detecting errors in data cells transmitted by wireless communication. It has been recognized that for a given code length there is a higher

probability of detecting an error using an error detection technique than there is for determining that a detectable but non-correctable error pattern occurred using an FEC technique. Furthermore, for some applications, as long as the header is correct, there is utility in forwarding a cell with a corrupted payload. This architecture and method can be used in both point-to-point and point-to-multipoint radio units. In either system, the transmitter of a cell reconfigures the cell for transmission such that the receiving radio unit can detect errors that occur in the header with greater accuracy than conventional techniques. In particular, a reconfigured cell includes enhanced header error detection coding by including an extended header error code (EHEC). The receiving unit retrieves the reconfigured cell from the transmitted radio bit stream and detects header errors using the enhanced header error detection coding. If the receiving unit detects no header errors, various treatments can be applied. Typically, the enhanced header error detection coding is replaced by a conventional header error coding check if no further wireless transmission is required. The system can then simply forward such a cell, relying on higher layer protocols to determine what treatment should be performed on cells with corrupted payloads. Thus, there is provided a transceiver for receiving and transmitting data cells over a wireless interface, having the following features; a block processor having a transmit path for reconfiguring cells for transmission over the wireless interface and for receiving transmitted signals and processing received reconfigured cells; the block processor includes: a transmit header processor for assembling a new header for a cell to be transmitted, including: means for extracting HEC from said cell, and means for calculating and inserting an EHEC into the cell

header; a receive header processor, including: means for extracting EHEC from a received cell, means for replacing the EHEC with an HEC, and means for detecting errors in the received cell header; and means for discarding a received cell if an error in the header is detected (column 1 line 53-column 3 line 15, Figure 4, column 4 lines 45-54). Not explicitly taught in this invention, is the use of error flags. However, other aspects of the invention provide for enhanced treatments and optional features. For example, additional Forward Error Correction or error detection coding can be applied, either to cells or blocks of cells. FEC has the advantage of generally improving the radio transmissions. Either way, this additional coding can help determine the type of treatment to be applied. For example, if detectable but uncorrectable errors are detected on a particular cell, but no error is detected in the header, then the system can conclude that there is an error in the payload. This can allow systems to select between various treatments, including: forwarding the cell, forwarding the cell with a flag, discarding the cell, and producing an indication of the error to a higher layer protocol. For groups of related cells for which the payload of every cell is necessary, special treatments can be applied to conserve bandwidth by discontinuing the forwarding and/or transmission of subsequent cells of a message once a payload error has been detected in any cell of a message. Therefore it would have been obvious to a person having ordinary skill in the art at the time this invention was made to use the system of Strawczynski et al. to send error flags indicating an error in the header. This would have been obvious as suggested (column 2 line 60 through column 3 line 15) with the discussion of using error flags in messages sent.

As per claim 2, Strawczynski et al. teaches that if detectable but uncorrectable errors are detected on a particular cell, but no error is detected in the header, then the system can conclude that there is an error in the payload. This can allow systems to select between various treatments, including: forwarding the cell, forwarding the cell with a flag, (column 2 line 60 through column 3 line 15).

As per claims 4 and 5, Strawczynski et al. teaches a method for treating errors by performing an additional operation which indicates whether there is an (uncorrectable) error in a cell as well as using, in this embodiment, the enhanced header error check on the header in order to determine whether there are errors in the header, and acting accordingly. (see FIG. 6,) Either a forward error correction (FEC) or an additional error detection step is performed on each cell. Note that this additional step can be performed in a block, which includes a group of cells, although this adds complexity and an increased probability of discarding a good cell, and is therefor, although possible, not preferred. Each reconfigured cell is FEC encoded prior to transmission. During reception, the receive block processor performs FEC decoding. During this step, correctable errors are corrected. As part of the FEC decoding process, a determination is made as to whether there were detectable but uncorrectable error patterns. If there are no uncorrectable errors, the EHEC header error check step is performed, in order to determine whether the EHEC shows a valid header was received. If a valid header was received, then the cell is reconfigured back to conventional ATM format and forwarded,

otherwise it is discarded. If there is an indication that there was an uncorrectable error in the cell, a determination is made as to whether there was a valid header received. If there was an error in the header, the cell is discarded. Various treatments can be applied depending on the nature of the payload. Treatments include forwarding the cell, forwarding the cell with a flag, discarding the cell, or producing an indication to a higher layer protocol of the error (Column 3 line 59 through column 4 line 19, column 6 line 24 through column 7 line 46, figure 1,figures 6a,b and figure 7).

As per claims 6 and 8, Strawczynski et al. teaches a method in which an error indication of data can be sent to another layer and various protocols can be used (column 3 lines 2-9 and lines 51-58).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,701,363 Chiu et al.

This Patent teaches adding headers and creating protocols in multimedia systems.

U.S. Patent No. 6,310,897 Watannabe et al.

This patent teaches in an information transmission system for segmenting information into two or more layers, and transmitting a sync signal and header information required for decoding upon adding the sync signal and the header

information to each layer, there are provided an encoding apparatus comprising means for inserting designation information having a predetermined pattern in the header information, and means capable of transmitting information which has already been transmitted from an upper layer or part of the information, information which has already been transmitted within the same layer or part of the information, or information capable of reconstructing the contents (the contents of a picture, e.g., a human figure or face) of information which has already been transmitted from the upper layer or within the same layer or the contents of part of the information, and a decoding apparatus corresponding to the encoding apparatus.

The examiner would suggest applicant read not only the cited portions of the references but also the claims and the description. If applicant has further questions on this application or the current rejection, the examiner is available by telephone.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Britt whose telephone number is 703-308-2391. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 703-305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CB

Cynthia Britt
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